

Patent Claims

1. Method for stopping elevators, particularly by using at least one AC motor (14) driven by a static frequency converter (18), in which a brake relay (6) controls the brake (15) of the motor (14) so that de-energising the brake relay (6) will brake the motor (14), the brake relay (6) being connected with a safety switch (9) in such a manner that de-energising the brake relay (6) will reliably block the control impulses required for generating the driving motor field.
2. Method according to claim 1, characterised in that a series-connected power semiconductor (20) will disconnect faster than the contact (19) of the brake relay (6) used to control the brake (15).
3. Method according to claim 1 or 2, characterised in that if a safety system (2) is triggered, a call (5) will control the brake relay (6) so that it is pulled in.
4. System for implementation of the method according to claim 1 comprising an elevator safety circuit (1) with preferably series-connected safety systems (2), acting via the elevator control (3) upon the brake relay (6) located in a frequency converter (18), said brake relay (6) controlling the brake (15) of the motor (14), the frequency converter (18) comprising a frequency converter logic unit (8) that produces control signals, used by the motor control power semiconductors contained in the inverter (13), for a rotating-field-producing pulse pattern, and a safety switch (9), which is on the one side connected to the brake relay (6) and on the other side to the power semiconductors, so that de-energising the brake relay (6) will disconnect the torque-generating, rotating field of the motor (14).
5. System according to claim 4, characterised in that the brake relay (6) used is an emergency-out relay, preferably conforming to EN 954-1, category 4.

6. System according to claim 4 or 5, characterised in that only one brake relay (6) is provided.
7. System according to one of the claims 4 to 6, characterised in that the frequency converter (18) is located in the connection box or in the housing of the elevator motor.
8. System according to one of the claims 4 to 7, characterised in that the contact (19) of the brake relay (6) controlling the brake (15) is connected in series with a power semiconductor (20).